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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,802	09/19/2005	Richard John Hawes	920602-99756	4240

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EXAMINER	
PRAKASAM, RAMYA G	
ART UNIT	PAPER NUMBER
3651	

NOTIFICATION DATE	DELIVERY MODE
04/15/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patent-ch@btlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/541,802	HAWES, RICHARD JOHN	
	Examiner	Art Unit	
	RAMYA PRAKASAM	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *91-127* is/are pending in the application.

4a) Of the above claim(s) *95,96,98,101,111,115 and 116* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *91-94, 97, 99, 100, 102-110, 112-114, and 117-127* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species A2 and B3, drawn to Claims 91-94, 97, 99, 100, 102-110, 112-114, and 117-127, in the reply filed on 12/24/2009 is acknowledged.

2. Applicant's argument with regards to the restriction requirement of Group C is found persuasive. Therefore, the restriction requirement of Group C is withdrawn.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Specification

4. The abstract of the disclosure is objected to because the abstract clearly exceeds 150 words. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. Correction is required. See MPEP § 608.01(b).

Claim Objections

5. Claims 91-127 are objected to because, as provided in CFR 1.75(i), where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. Appropriate correction is required.

6. Claim 119 is objected to because of the following informalities: it appears that the last line of the claim has omitted an “and". The last line of the claim should read “second position and wherein the lost motion connection is between the robotic arm and the tooling”. Appropriate correction is required.

7. Claim 120 is objected to because of the following informalities: line 11 of the claim should read “second position and wherein the drive means is torsionally stiff in a plane parallel to that in which the”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 91-94, 97, 99, 100, 102-110, 112-114, and 117-127 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 91 recites the limitation "the latter can be picked up by the blades by operating the drive means”. It is unclear as to what “the latter:" is referring to. Appropriate clarification and correction is required.

Claim 91 further recites the limitation "thereby in use to prevent any unwanted rotational skewing or twisting or lateral movement of an article relative to the blades as the latter slide therebelow”. It is unclear as to what latter refers to in this particular limitation as well. Appropriate clarification and correction is required.

Claim 97 recites the limitation “serving to restrain the latter from moving under the influence of subsequent blade movement therebelow either to pick up or to release

the articles". It is unclear as to what the latter refers to in this limitation. Appropriate clarification and correction is required.

10. Claim 127 recites the limitation "the viewing system" where no viewing system was previously defined. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 91-92, 112-114 and 117 are rejected under 35 U.S.C. 102(b) as being anticipated by Lotz (US Patent No. 4,026,421).

Lotz discloses tooling which is adapted to be secured to the movable end of a computer controlled robotic arm (M), by which in use articles can be picked up from one position, optionally rotated in transit and lowered into a second position, which tooling comprises:

- Two blades each having a leading edge and trailing edge (20 on either side), and both being movable between a first position in which their leading edges are separated by a large gap and a second position in which the leading edges overlap, or are in contact or are separated by a smaller gap (See Figure 3);

- A drive means (32 – solenoid and 29 – spring) for effecting relative movement between the two blades for moving them between the first and second positions, whereby in use with the blades in the first position the tooling can be lowered so that the undersides of the two blades just make contact with a surface on which an article is resting with the two leading edges of the blades on opposite sides of the article and the latter can be picked up by the blades by operating the drive means so as to move the blades in their second position below the article (See Figure 3 and Column 6, lines 1-9); and
- A resilient movement retraining mechanism (32, 24, 26) including article engaging means which in use is adapted to remain stationary while the blades move relatively thereto, whereby the engagement between the article engaging means and the article will resist lateral or rotational movement of the article relative to the blades as a result of movement thereof, thereby in use to prevent any unwanted rotational skewing or twisting or lateral movement of an article relative to the blades as the latter slide therebelow (See Figure 3 – when in position 2, no movement of the arms, therefore preventing lateral or rotational movement of the article).
- Re Claim 92: Wherein each of the trailing edges of the blades includes an upstanding lip or ridge or wall (side portion of 20) which in use will engage opposite edge regions of the article when the blades occupy their second position (See Figure 3).

- Re Claim 102: Wherein in use rotation of an article in transit between the first and second position is achieved by rotating one part of the robotic arm relative to another part thereof, or by rotating the tooling relative to the robotic arm (See Figure 3 – 22 on left side rotates with respect to 22 on right side).
- Re Claim 112: wherein the mechanism by which the two blades and/or support members (if provided) are caused to move exerts negligible torque about the torsion drive axis of the robotic arm and/or about the rotational axis between the arm and the tooling and/or about any axis about which one part of the arm can rotate relative to another part thereof (See Figure 3 - drive mechanism produces no torsion or rotation about the z axis for any of the arms).
- Re Claim 113: wherein the drive means acts equally and oppositely on the two blades (See Column 5, lines 30-37 – simultaneous force between each side being biased close to each other by a spring).
- Re Claim 114: wherein the drive means acts equally and oppositely on the two support members. (See Column 5, lines 30-37 – simultaneous force between each side being biased close to each other by a spring).
- Re Claim 117: wherein the robotic arm includes a rotational drive (24, 25, 32 - the robotic arm rotates the tooling and therefore the article therein), for rotating tooling attached thereto relative to the arm, whereby in use this is employed for orienting the tooling and therefore an article therein, during transit.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 126 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lotz in view of McMurray (US Patent No. 5,969,339).

Lotz discloses all claimed limitations, including:

- A first conveyor (2),
- A second conveyor spaced from the first (14);
- A robotic arm (M)
- Where the arm and tooling are controllable by signals (electronic transducers emit a signal - See Column 5, lines 43-48) to position the tooling around an article on one conveyor (See Column 5, lines 58-67 - Column 6– lines 1-9) to position the tooling around an article on one conveyor, and to slide the blades thereof below the article, and thereafter lift the article from the one conveyor by appropriately controlling the robotic arm, and moving the arm and therefore the article-containing tooling so as to position it over the other conveyor and thereafter to open the blades and deposit the article on the other conveyor (See Column 4, lines 25-34).

- A sensor means (10) producing signals to determine the position or orientation or nature of each article on the conveyor (See Column 4, lines 44-60).

Lotz, however, fails to explicitly disclose the use of a computer control emitting the signals. McMurray discloses the use of computer control (See Column 5, line 31) that utilizes a sensor means (See Column 5, line 29) to determine location in order to position tooling (12) to move the article from one position to another for the purpose of providing accurate coordinates of the location of the article (See Abstract). It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify Lotz by utilizing computer control that utilizes a sensor means to determine location in order to position tooling to move the article from one position to another for the purpose of providing accurate coordinates of the location of the article.

Allowable Subject Matter

15. Claims 93-94, 97, 99, 100, 103-110, and 118-125 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Claims 93-94 recite a movement restraining mechanism that comprises one spike that point generally perpendicularly towards the plane containing the two blades,

where when the tooling is lowered, the spike penetrates the article before the blades make contact with the surface on which the article rests.

Claims 97, 99 and 100 recite a movement restraining mechanism comprising a resilient deformable member located above the plane containing the two blades such that as the tooling is lowered onto an article, the underside of the deformable member engages the upper surface of the article and becomes deformed in order for the thickness of the article to be accommodated for before the blades make contact with the surface on which the article rests.

Claims 103-110 recite a support member that is positioned above the blades such that the drive means moves both the support members and blades until the article is gripped between the support members, and only thereafter are the blades moved below the article, such that the support members serve to grip the article even when the blades are withdrawn from below the article.

Claims 118 – 125 recite the unique limitations of the blades being pressed into contact with the flat surface such that a resilient lost motion connection is provided between the blades and the robotic arms which permits the blades to make contact with the support surface shortly before the downward movement of the robotic arm is stopped, and during the final movement of the arm in which the resilient lost motion connection is compressed after the blades make contact with the surface, the energy stored in the compression serves to exert a downward force on the blades to keep the blades in sliding contact with the surface as the blades move into second position.

Claim 127 recites a system that includes both a camera means and a sensor means to product signals, the sensor being programmed to determine the position, orientation, or nature of the article, generating signals that lift, rotate, or lower the tooling or adjust the robot arm to position the article in precisely the right point in time and in the correct orientation, wherein the conveyor has trays and the camera and sensors are set so that the computer can identify the precise position of each tray or container relative to the robotic arm, and the computer can control the movement of both conveyors to ensure that a specific tray is at a specific position at a specific time so that a specific article can be placed in that tray.

These limitations, in combination with the other limitations of the claims, were not found in the relevant prior art.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMYA PRAKASAM whose telephone number is (571)272-6011. The examiner can normally be reached on Monday - Thursday, 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571)272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

4/12/2010
RGP

/RAMYA PRAKASAM/
Examiner, Art Unit 3651